

thread. From this size upward I have no difficulty in finding abundant examples as gradually increasing in diameter as they did in length—thus furnishing a pretty strong evidence that the stem grows under the influence of its own innate powers, and is not, therefore, a deposit emanating from the body of the monad, except, perhaps, as far as it may be nourished by a fluid circulating within its hollow core.”

[To be continued.]

XXVIII.—*Observations on the Fur-Seals of the Antarctic Seas and the Cape of Good Hope, with the Description of a new Species.* By Dr. J. E. GRAY, F.R.S., V.P.Z.S.

FURTHER research and additional specimens have shown that, with all the attention I had bestowed on the Seals which had been named *Phoca falklandica*, I have some additions which require to be made to my former paper.

Capt. Abbot assures me that there were only three kinds of Seals found in the Falkland Islands when he was there, about ten years ago,—viz. (1) the Sea-Bear (*Otaria jubata*), (2) the Fur-Seal (*Arctocephalus nigrescens*), which are Eared Seals, and (3) the Sea-Leopard (*Stenorhynchus leptonyx*), which is an Earless Hair-Seal.

According to Pernetty (*Voy. aux îles Malouines*, p. 202), Sea-Lions or Sea-Elephants (*Morunga elephantina*) were found there in his time: they may have been driven away or all destroyed by the sealers; and some other species that formerly lived in the islands may have shared the same fate. If that is the case, the beautiful Fur-Seal in the British Museum which I have named *Arctocephalus falklandicus* is not now found in the Falkland Islands, though it was received as a Seal from there. On my showing Mr. Bartlett the specimen, he brought me a furrier's small imperfect skin of the same species, which he had purchased of a fellmonger, who assured him that such Fur-Seal skins were only received from the arctic part of the Pacific Ocean. If this be true, the skin was probably that of a young individual either of Steller's Sea-Bear (*Eumetopias Stelleri*) or of a species allied to it, which, as I mentioned in my former paper, are the only Seals that have such a close, soft, elastic fur.

The statement that the Museum specimen of *Arctocephalus falklandicus* was not a Falkland but a northern species renders it necessary that further research should be made to determine the two specimens in the Museum of Science and Art at Edinburgh, which were, according to Mr. R. Hamilton, conveyed to

this country and deposited in this museum by Capt. Weddell, the enterprising navigator who visited the Antarctic regions in 1823. They are both females, and were prepared in Edinburgh and described by Mr. R. Hamilton in this Journal (as referred to in the former paper), who observes that "the personal observation of Capt. Weddell enabled him at once to identify the [*Phoca*] *falklandica* with his Fur-Seal" (see Ann. Nat. Hist. 1838, vol. ii. p. 91). I do not find it stated whence Capt. Weddell procured these specimens; it is only said that "he encountered the Fur-Seal in South Georgia, among the South Orkneys, and in much greater numbers in the South Shetland Islands, which he was the first to discover" (*ibid.* p. 84-85); and he expressly states that the only Seal inhabiting the last-named islands is the Fur-Seal; so that probably the specimen he gave to the Edinburgh Museum came from either South Georgia or the South Shetlands.

I wrote to my friend Mr. Thomas C. Archer, the Director of the Edinburgh Museum of Science and Arts, to ask him if he would kindly send me a few hairs from one of these Seals; he most readily acceded to my request by return of post, accompanied by an offer to send one of the Seals to the Museum for examination, if I wished it. As the hairs alone showed that the Seal was not like any other of the South-American Seals that I had described in my former paper, being most like those of the Seal to which I had referred it, but still appearing rather harsher, I most gladly accepted his very kind and liberal offer.

I was much pleased, when the specimen arrived, to find that it evidently is the same as my *Arctocephalus falklandicus*, and that my reference to Mr. R. Hamilton's description and figure was correct. The fur in this specimen is considerably darker and harsher than in that in the British Museum; but this may arise from the animal having been stuffed and exhibited for many years, and, perhaps, collected at a different time of year. In every other respect, both as to the form and size of the limbs (which are small compared with the size of the body) and the distribution of the colours, they agree.

This animal, which was brought from the Antarctic Ocean, may formerly have inhabited the Falkland Islands, and, like the Sea-Elephant found there by Pernetty, have been destroyed or driven away. The Sea-Leopards (*A. Hookeri*) were brought from the Antarctic Ocean as well as from the Falklands.

If that was the case, it may be the Falkland-Island Seal of Pennant and the *Phoca Hawillii* that Cuvier described, as I formerly believed. There are no other Fur-Seals now

known of a dark-grey colour, with a whitish underside, that I have seen.

The *A. falklandicus* is very like the Fur-Seal from Australia (*A. cinereus*) in the length of the under-fur as compared with the length of the hairs, and also in the colour of the under-fur and hair; but the fur is much softer, and its general colour is much darker, both above and below.

M. de Buffon describes a small Eared Seal, which he calls a "second Phoque" (vol. xiii. p. 341, t. 43, where it is named "le petit Phoque"), which he was assured came from India, but very probably came from the Levant; and he considers it adult, because it has all its teeth. It is only one-fifth of the size of the Seal of the European seas (Hist. Nat. xiii. p. 344). He further speaks of it as "le petit Phoque noir des Indes et du Levant" (p. 345). It is evidently a young Eared Seal. The figure is probably from the skin, with the bones of the toes and jaws, presented to the cabinet by M. Mauduit (mentioned at p. 433. n. 1273), and said to have come from India.

The specimen Buffon figured, then being in the Paris Museum, was thus described by Cuvier (Oss. Foss. v. p. 220):—"Cet animal a deux pieds de long; ses oreilles sont grandes et pointues; son pelage est fourré, luisant, d'un brun noir très-foncé et a sa nuance blanchâtre. Le ventre seul est brun jaunâtre." The teeth show that it is young.

The figure and description of the *Petit Phoque* of Buffon have had the following names given to them:—

*Little Seal* by Pennant and Shaw.

*Phoca pusilla*, Schreber, Säugeth. 314.

*Phoca parva*, Bodd. Elench. 78.

*Otaria pusilla*, Desm. N. Dict.

*Otaria Peronii*, Desm. Mamm.

Fischer, in his 'Synopsis,' under *Phoca pusilla*, p. 252, gives the Cape of Good Hope and Rotteness Island, on the coast of Australia, as the habitat of the species.

The description of Cuvier much more nearly fits that of the young *Arctocephalus nigrescens* from the Falkland Islands. The fur of the young Cape Seal is dark, black above and below; the hairs are slender, and brown (not whitish) at the base; and the underside is not yellowish brown; so that it is very doubtful if it is the young of the Cape Seal.

Dr. Peters, believing Buffon's specimen to be a young Cape Seal, changed the name of *Delalandii* to *pusilla*.

There formerly existed in the Museum of the Royal Society an Eared Seal without any habitat; it is called the Long-necked Seal in Grew's 'Rarities,' p. 95, described and figured under

that name by Parsons in the Phil. Trans. xlvii. t. 6, and noticed in Pennant's 'Quadrupeds,' ii. p. 274. Dr. Shaw, in his 'Zoology,' i. p. 256, translated the name into *Phoca longicollis*, and copied Parsons's figure. The name and the form of the front feet are enough to show that it is an Eared Seal; for the neck of these animals is always long compared with the neck of the Earless Seals or *Phocidae*. Fischer, in his 'Synopsis,' p. 240, overlooking this character and the description of the front feet, considers it the same as the Sea-Leopard of Weddell (*Phoca Weddellii*) from the Antarctic Ocean, an Earless Seal. Though the habitat is not given, there can be no doubt, when we consider the geographical distribution of the Eared Seal, that it must have been received either from the southern part of South America or from the Cape of Good Hope, as the animals of the Northern Pacific and of Australia were not known or brought to England in 1686. As no account of the colour of the fur is given, it is impossible to determine to which of the species inhabiting these countries it should be referred. It is most probably the Sea-Lion (*Otaria leonina*), as that is the animal which is most generally distributed and commonly brought to England. The sailors sometimes call it the "Long-necked Seal."

Dr. J. R. Forster, during his voyage with Cook in 1775, observed an Eared Seal at the Cape of Good Hope, which he called *Phoca ursina*, believing it to be the same he had previously observed in New Zealand. (See Descript. Animal. p. 315).

The sixth volume of the Supplement to Buffon's Hist. Nat. contains an account of the Sea-Bears of the Cape of Good Hope, communicated by M. de Pagès (vi. p. 343, 354, 357). He described the hairs of the young as blackish, becoming silver-grey at the tips as they increase in age.

M. Cuvier described an Eared Seal received by M. Delalande from the Cape, 3 feet 6 inches long. The fur is close, soft, woolly at the base, the tips annulated with grey and black, giving a general reddish grey-brown tone. The belly is paler, and the legs blackish. The whiskers are strong, simple, and black. (Oss. Foss. v. 220.) M. Delalande also sent the skeleton of a young animal and the head of an adult; the skull of the latter is figured by Cuvier (Oss. Foss. v. t. 18. f. 5).

These specimens were described as *Otaria Delalandii*, Cuvier, by M. F. Cuvier (Dict. Sc. Nat. xxxix. p. 423); and the skull of an aged animal was figured by me as that of *Arctocephalus Delalandii* in the 'Proceedings of the Zoological Society,' 1859, p. 107, t. 69; it is also described in my 'Catalogue of Seals and Whales in the British Museum,' p. 52. The species grows

to a much larger size than the specimen described by M. Cuvier. There are two well-grown stuffed specimens of it in the Collection of the British Museum, and there is very little to add to Cuvier's description above referred to.

Mr. Bartlett kindly sent to the British Museum for my examination a series of the skins of this Seal as they are sold by the fellmonger, on which I made the following notes:—

1. Adult male, with slight mane, called in the sale-catalogue "large-wig." Fur whitish, with a few intermixed black hairs; under-fur short, reddish.

2. Adult, without the mane, called in the sale-catalogue "middling." Fur reddish white, grizzled with scattered black hairs; underside of the body darker, reddish brown; under-fur short, reddish.

3. Young, about 18 inches long, called in the sale-catalogue "black pup," from the Cape of Good Hope. Fur black, polished, soft, smooth, without any grey tips, rather browner black beneath; under-fur brown, very sparse; hairs slender, polished, black, with very slender brown bases.

With these skins were two others, sold at the same time, and called "middling" Fur-Seals; but they are so different from all the others in the form of the hair as well as in its length, and they are also so nearly destitute of under-fur, except just on the crown of the head, that I am convinced they could not be dressed as Fur-Seals; and I believe they are a most distinct species, which I propose to call

*Arctocephalus nivosus.*

Fur very short, close-pressed, black, varied with close, small, often confluent, white spots; underside of neck with a few scattered white hairs; belly red brown (nearly bay); hairs short, thick, of one colour to the base; under-fur none, except a very few hairs on the crown of the head.

*Hab.* Cape of Good Hope. B.M.

Length of skin nearly 8 feet, but stretched and flattened.

Unfortunately these skins are without skulls; so I cannot decide to which subgenus they ought to be referred.

These and those previously mentioned have been transferred by Mr. Bartlett to the Museum Collection.